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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,332	09/29/2006	Koji Yamashita	P30095	5384
7055 7590 10/09/2007 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER PHILOGENE, HAISSA	
			ART UNIT 2821	PAPER NUMBER
			NOTIFICATION DATE 10/09/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/596,332

Applicant(s)

YAMASHITA ET AL.

Examiner

Haissa Philogene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8-15 and 18-22 is/are rejected.
- 7) ☒ Claim(s) 2-7,16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/29/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "first timer, second timer, third timer, fourth timer, fifth timer, sixth timer, seventh timer" as recited in claims 1-5, 7-10, 20 and 21 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Figure 25 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: In page 6, line 9, change "2562816" to --63307695--. In page 23, line 2, before "25" add --figure--. In page 29, line 15, change "T2" to --T3--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8-15, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka et al., Patent No. 6,850,015 in view of Nishimura, JP63307695, cited by Applicant.

As per claim 1, Ishizuka discloses in Fig.8 a lighting device for a high-pressure discharge lamp (HPL) comprising: a lighting circuit (DC/AC) for controlling at least one of voltage and current fed from an external power supply(DC) with

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SW1 closed to the high-pressure discharge lamp so as to turn on the high-pressure discharge lamp; an igniter circuit (IG) for applying start-up high-voltage pulses to the high-pressure discharge lamp; a turn on detection circuit (LD) for detecting the lamp turn on (see also Col.21, lines 8-17). Ishizuka does not disclose a first timer which permits igniter circuit operation for a predetermined period if the high-pressure discharge lamp is not turned on; a second timer which activates the first timer at a predetermined intermittent time interval repetitively; and a third timer which counts the time elapsed for restarting the high-pressure discharge lamp, and prohibits the operation of the igniter circuit after predetermined restarting time had reached. However, these features are well-known in the art as evidenced by Nishimura which discloses in Figs. 1 and 2 a lighting device for a high-pressure discharge lamp (DL) having a first timer (TM1) which permits igniter circuit (IGN) operation for a predetermined period (T1) if the high-pressure discharge lamp is not turned on; a second timer (TM2) which activates the first timer at a predetermined intermittent time interval (T2) repetitively; and a third timer (TM3) which counts the time elapsed for restarting the high-pressure discharge lamp, and prohibits the operation of the igniter circuit after predetermined restarting time (T3) had reached (see abstract, see also specification, page 2, lines 15-25 and page 3, lines 1-19 describing the same reference). It would have obvious to a person having ordinary skill in the art at the time the invention was made to employ the timers as taught by Nishimura into the Ishizuka's lighting device type, because it would allow a reduction in the generation of electric noise and the deterioration of the wiring.

As per claims 8-12, Ishizuka in view of Nishimura discloses the claimed invention substantially as explained above. Further, Nishimura discloses that said predetermined period of the first timer (TM1) just after initiation of the operation of the igniter circuit is set at a relatively large value (see Fig.2) at a time sufficient for start-up of the high-pressure discharge lamp (see abstract and see also specification, page 2, lines 19-23); that said predetermined period (T1) of the first timer (TM1) and said time interval (T2) of the second timer (TM2) are set in such a manner as to prevent an intra-outer-tube discharge from occurring in the high-pressure discharge lamp (DL) by intermittently operating the first timer (TM1); wherein the lighting circuit consists of a copper-iron ballast (see specification, page 3, lines 18-19); wherein the igniter circuit (IGN) outputs a single high-voltage pulse around a peak of an AC power supply voltage fed from an external power supply (V1) to the lighting circuit (see Figs.1 and 6).

As per claims 13-15, Ishizuka in view of Nishimura discloses the claimed

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invention substantially as explained above. Further, Ishizuka discloses that the lighting circuit (DC/AC in Fig.8) consists of an electronic ballast; wherein the lighting circuit (DC/AC) outputs a rectangular-wave alternating current, and the igniter circuit (IG) superimposes the start-up high-voltage pulses on an output rectangular-wave voltage from the lighting circuit (see Fig.8); wherein the igniter circuit (IG) is capable of superimposing a single one of the high-voltage pulses one time per one-half cycle of the output rectangular-wave voltage provided by the lighting circuit (DC/AC).

As per claims 20 and 21, Ishizuka in view of Nishimura discloses the claimed invention substantially as explained above. Further, Ishizuka discloses that the high-pressure discharge lamp (HPL) has a rated lamp power of 60W or 250 W or smaller (col.4, lines 59-61), a predetermined period of the first timer i.e. during the startup time being set for about 1 to 5 seconds (see Col.6, lines 3-4), and a time interval of the second timer i.e. after startup being set about 0.4 to 4 seconds (see Col.6, lines 45-46).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka in view of Nishimura as applied to claims 1 and 13 above, and further in view of Kumagai et al., Patent No. 7,141,937.

Ishizuka in view of Nishimura discloses the claimed invention substantially as explained above except for the igniter circuit generating the high-voltage pulses through the use of a resonance voltage. Kumagai discloses a lighting device comprising a light circuit (3) wherein a resonant circuit (5) readable as an igniter circuit generates high-voltage pulses to the lamp DL for startup through the use of a resonance voltage of 1 KV or more (see Col.12, lines 34-41 and Col.21, lines 62-63). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the resonance voltage as taught Kumagai into the Ishizuka in view of Nishimura

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type lighting device, because it would allow an increase resonant voltage to be applied to the lamp as a high-pressure pulse.

Claims 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka in view of Nishimura as applied to claim 1 above, and further in view of Ohsawa, Patent No. 6,967,288.

As per claim 19, Ishizuka in view of Nishimura discloses the claimed invention substantially as explained above. Further, Ishizuka discloses in Fig.8 the lighting circuit (DC/AC) supplying power to the lamp (HPL), wherein the lighting circuit (DC/AC) outputs a rectangular-wave voltage alternating at a low frequency of several ten to several hundred Hz (see Col.20, lines 8-27), and the igniter circuit (IG) superimposes a high-pressure pulse voltage capable of being inherently 3-5 KV as high voltages on an output rectangular-wave voltage from the lighting circuit (see Fig.8). Ishizuka in view of Nishimura does not disclose a cable which comprises a plurality of electric wires each composed of a conductor having a thickness of 1 mm or less and an insulator covering the conductor, and a sheath having an insulating performance and covering the electric wires. Ohsawa discloses a lighting device (OC) comprising a cable (30) including a plurality of electric wires (31) each composed of a conductor having an inherent thickness of 1 mm or less as a flat-shape wire and an insulator (141) covering the conductor (31), and a

sheath (38) having an insulating performance and covering the electric wires(31) (see Figs. 1, 3, 4, 14). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the cable as taught by Ohsawa into the Ishizuka in view of Nishimura type lighting device, because it would allow a high-voltage harness of high mechanical and electrical reliability with shielding wire used to avoid the effect of electromagnetic wave noises in the device.

As per claim 22, Ishizuka in view of Nishimura discloses the claimed invention substantially as explained above. Further, Ishizuka discloses in Fig.23 a lighting apparatus having a case (13a) for housing the lighting circuit (DC/AC) and the igniter circuit (IG) or starter devices 13A, 13B (see Col.29, lines 43-45); a socket (11d) adapted to mechanically connected to a base (12d) of the high-pressure discharge lamp (12) (see Col.29, lines 19-22); a lamp fitting (11) including a reflector (11b, 11c) for reflecting light to be emitted from the high-pressure discharge lamp; wherein the lighting circuit (DC/AC) and the igniter circuit (IG) or starter devices are electrically connected to the socket through an inherent cable as lead wire. Ishizuka in view of Nishimura does not disclose the cable including a plurality of electric wires each covered by an insulator, and a sheath having an insulting performance and covering the electric wires. Ohsawa discloses a lighting apparatus comprising a lighting

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device and a cable (30) including a plurality of electric wires (31) each covered by an insulator (141), and a sheath (38) having an insulting performance and covering the electric wires (31) (see Figs. 1, 3, 4, 14). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the cable as taught by Ohsawa into the Ishizuka in view of Nishimura type lighting device, because it would allow a high-voltage harness of high mechanical and electrical reliability with shielding wire used to avoid the effect of electromagnetic wave noises in the device.

Allowable Subject Matter

Claims 2-7, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okude et al., Patent No. 5,942,859 ; Iyama et al., Patent No. 4,447,763.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (571) 272-1827. The examiner can normally be reached on 8:30 A.M.-6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on (571)272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

hp

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